

## TVSS/SPD Application Highlights for Waste Water Treatment

### SCADA/4-20mA Data Loops

These critical control systems are highly prone to damage from transient voltage surges. These low voltage circuits, including 4-20mA data loops, are routed all over a plant, connecting sensitive equipment in the field to control panels, etc. They can also act like "antennas", directing lightning and other high-voltage spikes into the connected equipment. *Surge Suppression Incorporated® has a wide selection of specialized protection products that are specifically designed to prevent surge-related damage on 4-20mA data loops, including DIN RAIL mounting, in stainless steel PIPE for in-line flex or conduit mounting!*

### Motors/Pumps

Electric motors are often located outdoors, sometimes hundreds of feet away from the MCC or VFD control points. They are used to run aerators, bar screens, mixing devices, etc. They can suffer severe exposure to lightning and other large external transients, including the "reflective wave phenomena" that may damage both the motor and the VFD during normal operations. Consider the difference in electrical potential that may exist between the motor and the electrical source. *Surge Suppression Incorporated® has extremely strong suppression products created specifically for these applications, including for installation between a VFD and motor!*

### Automatic/Manual Transfer Switch

This equipment is subject to severe surge events due to the sudden switching from utility power to alternate power sources. Such events can severely impair connected electrical equipment. It is a major source of damaging transient voltage surges. ***Surge Suppression Incorporated®'s products will mitigate damaging transients thus preventing damage and downtime to your critical equipment and systems!***

### Back-up Generator

Generators vary from large permanently mounted units to portable models. Most generators experience some power fluctuations during operation creating high-energy transients that can destroy sensitive electronics and critical equipment. *Surge Suppression Incorporated® has designed specific methods to protect against the transients that are "generated" by this equipment to ensure that your equipment can be used safely*

*while on a back-up generator. The other benefit of this approach is the protection of the generator itself, since there is usually a difference in electrical potential between the building and the genset, the suppression equipment helps to protect the generator from damaging transient surges even when it is not running! **After all, what good is a generator that fails to operate?***

## **Service Entrance Mains**

This is where huge electrical surges, such as lightning or utility grid switching related transients, enter your facility. These are the high-energy surges that cause major damage throughout an entire electrical system. *Surge Suppression Incorporated® has a complete line of protection products up to and including 7200 volts in both AC and DC, from 50 Hz up to 400 Hz and everything in between!*

## **Sub-Mains, Distribution Level, MCC's**

Electrical loads at these locations are among the highest found in the facility. Usually these loads are absolutely critical to the operation of any facility, including the security and safety systems. *Surge Suppression Incorporated® has very compact products with outstanding performance and strength that are ideal for installation in tight spaces, even inside the cabinets if necessary!*

## **Branch Panels**

These panels carry a large number of important loads. Often there will be a mixture of equipment; such as welders, motors and other inductive loads; that produce very damaging transient voltage surges. *Surge Suppression Incorporated® will mitigate these damaging transients and **prevent damage** to your valuable equipment and the resulting **downtime!***

## **Small Branch/Sub-Branch/Dedicated Branch Panels**

From a surge protection standpoint, these locations are among the most important in an entire facility. This is where the most critical equipment is connected to the electrical system and is where everything gets to "share" all of the transient voltage surges that are created from whatever the source. *Surge Suppression Incorporated® has the most advanced "filtering" type of surge protective devices available on the market today. This is exactly what is needed in these situations to offer the very best protection for your critical equipment and **prevent downtime!***

## Security/Access Systems

These critical systems are extremely vulnerable to damage or destruction by surge events. Due to their wide distribution throughout a plant, they can act as a highway, routing damaging transients to all points of your facility. These pathways include the power supply, data entry points to the "motherboard", keypads, card readers and sensors. These systems typically include elevated cameras that can be highly susceptible to lightning. *Surge Suppression Incorporated® had designed a full line of suppression components for all elements of a security system. No matter what voltage, number of wires, etc., a high-quality surge suppression product can protect it. **How secure is your facility in the event of a close lightning strike?***

## Laboratories

Laboratories use expensive and sensitive electronic equipment to perform its critical functions. Computers and other sensitive microprocessors are greatly susceptible to damaging transients. By the way, uninterruptible power supplies (UPS) devices are NOT effective surge suppressors! All too often, this fact is realized only **AFTER** the equipment they were supposed to protect is in smoking ruins. *Surge Suppression Incorporated® has the specialized suppression equipment required for such applications so your critical electronics are protected against damaging transient voltage surges. **Protect your investment!***

**Surge Suppression Incorporated® has extensive experience in reducing transient and lightning damage to the above listed concerns. We know how to prevent damage to valuable equipment, reduce downtime and improve your bottom line.**